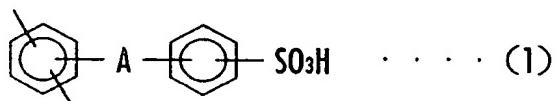
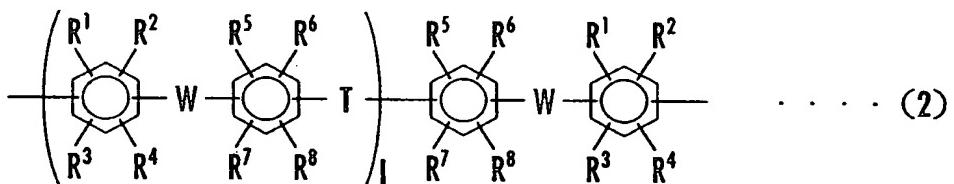


ABSTRACT OF THE DISCLOSURE

The present invention provides an electrode structure for polymer electrolyte fuel cells, inexpensive, and exhibiting excellent power production capacity and durability even under high temperature/low humidity conditions, and also provides a polymer electrolyte fuel cell which incorporates the same electrode structure. The present invention also provides an electrical device and transportation device, each incorporating the same polymer electrolyte fuel cell. The electrode structure comprises a pair of electrode catalyst layers 1,1, each containing a catalyst supported by carbon particles, and polymer electrolyte membrane 2 placed between these electrode catalyst layers 1,1. The polymer electrolyte membrane 2 is of a sulfonated polyarylene composed of 0.5 to 100% by mol of the first repeating unit represented by the general formula (1) and 0 to 99.5% by mol of the second repeating unit represented by the general formula (2):



(wherein, A is a divalent organic group; and a benzene ring includes its derivative),



(wherein, -W- is a divalent electron attracting group; -T- is a divalent organic group; and R<sup>1</sup> to R<sup>8</sup> are a hydrogen atom or fluorine atom, an alkyl group, fluorine-substituted alkyl group, allyl group, aryl group or cyano group, and may be the same or different).